



AMERICAN BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

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A Word of good counsel we ne'er should forget ;
And to keep out of danger is to keep out debt !
If peace and contentment and joy you would know,
Don't live upon credit, but pay as you go !

"Practical Turkey Raising" is the title of a new pamphlet just received. It is written by Fanny Field, the most experienced breeder of turkeys in America, and published by R. B. Mitchell, of Chicago, Ills. It is written expressly for those who are interested in profitable breeding of turkeys for the market. Price 25 cents. It can be obtained at this office.

Mrs. M. Crumrine, of Bryan, O., one of Mrs. Lizzie Cotton's pupils, reports the reception of a pencil drawing of her hive (costing \$3) and states that she has made some and found them successful in wintering bees on the summer stands. She also thinks that Mrs. Cotton's book is a plain and practical work. In justice we give the above, as we have published several complaints. Three dollars is still very high for a "pencil drawing of a hive."

Making Honey Vinegar.—Mr. C. F. Muth gives these instructions in *Gleanings*:

When making vinegar, one must know that water will turn into vinegar providing it contains the necessary quantity of sugar stuff, and is exposed to fresh air and a warm temperature. The warmer the temperature and the better the circulation of air, the sooner vinegar forms. A barrel is laid down, and an inch hole is bored in the upper end of each head, near the upper stave. This admits of a good air-passage over the body of the honey water. Tins with fine perforations nailed over these holes, with the rough side outward, exclude flies and skippers. Take about one pound of honey to one gallon of water, thoroughly mixed up, and nail a perforated tin on the bung-hole. We take 35 to 40 pounds of honey for a barrel containing 40 to 45 gallons of water. The warmest place in the yard is the best place for the barrel. If the sun shines on the barrel all day, it requires from the beginning of April to the end of October to make vinegar satisfactory for all purposes. If not sour enough by fall, it will be all right by Christmas or spring, if placed in the cellar or a warm room.

Kissing Bees.—In a woman's convention lately held, Mrs. Thomas, of Tacony, Pa., when speaking of the subject of "bee-keeping for women," said she had kept bees "for 25 years, and her earliest memory was of bees and tubs of honey," and then stated that she "had learned all the practical operations of bee-management before she ever saw a man lift a comb or transfer a colony." It will be seen that she was a wonderful woman, but her bees were still more wonderful ! ! She added : "My bees know me, and often kiss my hand." We know of hundreds who would prefer not to have any such familiarity exhibited by bees—Bro. Clarke, for instance ! When they kiss him, his lips swell up and he is apparently filled with poison !

But Mrs. Thomas has a splendid honey market, as well as wonderful bees. She says that when she began, she "received 50 cents a pound for comb honey in eight and ten pound boxes, and never had to go out after buyers." Two years ago she had 3,000 pounds of surplus from 25 colonies, and sold \$750 worth of honey ! Prodigious ! Honey 50 cents a pound ! Profits, \$30 per colony ! Wonderful bees—market—woman—and all !

Now see how unselfish she is. She wants every other woman to become an apiarist too, and puts it thus : "A woman who can obtain money to buy her bees and fixtures, may count on a return of \$200 to \$300 the second year, beside paying for the stock !"

This is clinched by the following : "Miss Angie Creed borrowed money and bought her stock, and two years after exhibited at the State Fair beautiful honey which sold at 40 to 50 cents a pound. It paid off her outlay and left a balance."

This *rosy* account is being extensively copied into the papers, and will, no doubt, induce many to embark in the business only to become disgusted when they find that the price of honey is less than one-fourth of that quoted above ; and much of the *rosy* speech at the convention proves to be but a "delusion and a snare !"

Feeding Bees in May.—Mr. Wm. B. Treadwell, in the *American Agriculturist* for May gives these instructions for beginners :

Large quantities of brood are reared in May, and after the red buds of the soft maple have put forth their heads there will be plenty of natural pollen for the bees to gather. If there are no maples or willows near, take some unbolted rye-flour, mix it with sawdust or cut straw, and set in a sunny corner, sheltered from the wind, when, if the bees require it, they will carry it freely. In localities where there is honey in the blossoms at this season, the bees will gather it very rapidly, and the more honey they get the faster the colony increases. Where there are not enough honey-producing flowers, by all means feed, at the entrance, say about a gill of hot feed every night. By feeding thus, your colonies will increase very rapidly, and when the honey commences to flow, they will be strong to gather it. Again, should there be honey in the blossoms, and cold and rainy weather set in, feed as above, for should the weather continue cold, the bees would naturally commence to destroy the work already accomplished, by tearing out and destroying the hatching brood. If bees are kept for increase alone, feed them every night, and continue to do so until honey can be gathered in abundance.

Bee-Catalogue of Thos. L. Thornton, Dividing Ridge, Ky., is received.

Building Air-Castles.—How often this is done, and how disappointed is the "builder" when light, truth and facts cause the air-castles to vanish. Mr. J. W. Sanders, of Le Grand, Iowa, writes us as follows concerning what he is pleased to call a "silver-plated air-castle :"

During the social talk of our last bee-meeting, there was a person present from some out-of-the-way rural district. He wanted to know how we fixed sugar to feed bees in order for them to make it into honey. He said there was being lots of it fed now for that purpose, and money could be made at it.

We told him he was mistaken, that sugar was not fed for that purpose, and could not be, with profit, even if desired. He thought it could, and said that parties in the East were doing it.

In order to prove it to us, he took an old circular from his pocket, handed it to me and said to me : "Read that," referring to a particular item in the circular.

The part referred to gave the great advantages of a bee-feeder, and how easy it was to feed bees with it. I turned the paper over, and found that it was James Heddon's circular, and the item referred to his bee-feeder.

A general smile came over those present. We told him what was meant by a bee-feeder, and what they were used for. I advised him to take the *AMERICAN BEE JOURNAL*, and invited him to attend our bee-meetings.

A disappointed look came over him, and he failed to make his appearance at our meeting in the afternoon. We think he returned home with his silver-plated "air-castle" all vanished !

Many prefer to do a fraudulent business rather than one which is honorable and honest. This man had no idea of "keeping bees"—but he wanted to "make honey !" He snapped at the idea of using a feeder (which was intended to keep bees from starving), when he supposed it could be used to feed the sugar, and have the bees make honey ! ! But when he found that the bees must *gather* the honey from the flowers, ready-made, distilled drop by drop in Nature's laboratory—pure, healthy, and nourishing—then he wanted none of it ! He must have a fraudulent article or nothing !

Bumble-Bees and Clover Blossoms.

—Prof. W. J. Beal, of the Michigan Agricultural College, writes thus on this subject in the *Farmer's Advocate* :

An inquiring friend would know "why the first crop of clover has no seed ; whether it is possible to distinguish the difference, if any, between the blossoms of the plant bearing the seed and that which contains the fertilizing quality ; and has the bumble-bee anything to do with it." So far as examined—the blossoms of the first crop of red clover have good pistils throughout, and good stamens, with plenty of what we should call good pollen. In other words, we cannot see why they are not just as capable of fertilization as those which come later. Experiments, repeated on the second crop for six years, give varying results, but in all cases they show that bumble-bees in Central Michigan increased the crop from 100 to 400 per cent. Other insects may also help in this matter. In Kansas they tell me bumble-bees are scarce, but clover seeds freely. Honey-bees at the Michigan Agricultural College, without any question, increase the yield of seeds of white clover enormously, in one case as 236 exceeds 5. I am satisfied that in some locations at least bumble-bees should be encouraged for the good they do to red clover. Now the problem is this : How can the entomologists rear and keep over winter large numbers of fertile queens ? It seems to me not improbable that the time may come when bumble-bee queens will be reared, bought and sold for their benefit to the crop of clover seed.

Our Queries

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Removing or Renewing Brood-Combs.

Query 409.—1. How often should the brood-combs of a hive be removed or renewed? 2. When is the best time of the year to remove them so as to get good, full sheets of worker-comb? 3. What becomes of the wax in those old brood-combs? Melting it gives very little wax to me.—A. J. F., Calif.

I have had no occasion for renewing my old combs in all of my 18 years' experience with bees.—G. M. DOOLITTLE.

I have not yet been confronted with this problem. I do not know what becomes of the wax, but I do know that old combs have yielded but little wax for me.—W. Z. HUTCHINSON.

1. Not oftener than 15 or 20 years, if it is good straight worker comb. 2. In the spring, using full sheets of foundation in their place. 3. Perhaps the wax in old combs decays.—G. L. TINKER.

1. Not until you experience a difficulty with them that their removal will remedy. 2. During the brood-rearing season, when there is not much honey being gathered. 3. There is very little in them.—C. W. DAYTON.

Once every 15 years is often enough to renew the combs. They might as well remain even longer, if not too dirty. There is just as much wax in those combs as ever there was, but it is a little more difficult to get it out.—DADANT & SON.

1. I have seen prosperous colonies on combs 20 years old. 2. After swarming is all past. If before swarming, drone comb will be built in large quantities. 3. The wax seems to be held back among so many cocoons.—JAMES HEDDON.

I cannot say, as I have kept bees only about 20 years. Good frames of straight worker-comb may be kept indefinitely. If to be changed, it may be done at any time, though only when colonies want bees, and not room to store, if we desire worker-comb, as we always do unless we use worker foundation. 3. The wax is all there; the comb is very thin.—A. J. COOK.

1. I remove old combs gradually as they become inferior. I never remove a whole set at once, because they do not all become inferior at once. I gradually work out the worst combs. I have not kept bees in movable frames long enough to know how long good combs will last; I have combs over 15 years old that do good service yet. 2. The best time to have

combs built is during the best honey flow. 3. I think the wax is there—the trouble is in separating the wax from so much refuse as collects about the wax in old combs. With the improved sun wax separator, I get a good turnout of wax from old combs.—G. W. DEMAREE.

1. I do not know. I have some now that have been in use for over 16 years, and they are as good as ever. They should not be renewed as long as they are good. 2. Early in the season as possible. 3. The wax becomes amalgamated with the "cocoons" lining the cells, that are left after the bees emerge, and so closely that but little can be obtained by melting down very old combs. Old combs, therefore, are far more valuable as combs, than the wax that can be extracted from them.—J. E. POND.

1. I do not know. Some of mine must be 20 or 25 years old, and I would not think of renewing them. 2. I get worker-comb at any time by using full sheets of foundation. 3. Is it not possible that the wax is still all there, but soaked into the cocoons, as it were, so as not to be easily separated?—C. C. MILLER.

1. If the combs are all right what do you want to remove them for? 2. In the fall, when looking over all the colonies for winter, I take out all defective frames and replace them with perfect ones. 3. I do not know.—H. D. CUTTING.

If they are not damaged, and contain sufficient worker-cells, they should be good for a quarter of a century or longer. Old brood-combs contain so many "cocoons," accumulating from the myriads of bees born in them, that they are unprofitable to melt for the wax.—THE EDITOR.

Getting New Brood-Combs Built.

Query 410.—In moving my bees last spring on a farm wagon, over rough roads, the combs were more or less broken and damaged, so that the frames are now stuck together. I wish to get new combs built by furnishing wired foundation. 1. Shall I invert the old hives and put the new ones containing the wired foundation on top of them? Or put the old hive on top of the new one, and force the bees to pass in and out through the lower story? 2. When should this be done, and how many frames of wired foundation should I put in at first? 3. How long will it take the bees to transfer their stores?—Bellevue, Ky.

I should put into practice what has been styled "modern transferring," as advised by Mr. Heddon.—W. Z. HUTCHINSON.

1. Put the new hives on the top. 2. At the beginning of the honey harvest. Gauge the number of frames by the size of the colony.—C. W. DAYTON.

I should say that about your best plan would be to wait until the swarming season arrives, and then transfer the bees to "those wired frames of foundation" by the Heddon plan.—G. M. DOOLITTLE.

1. Wait until fruit bloom, and then transfer by the Heddon method, and feed the stores to the bees in the top of the hive. The brood can be cared for in the old hive, *al a Heddon*, and can be transferred temporarily into

frames, and put in the top of the hive until the bees emerge from the cells. 3. It will depend upon the weather. Probably but a few days. The trouble will be with the brood, which will require 21 days from the last egg before all leave their cells.—J. E. POND.

Put the new hive on top of the old one. It will take more or less time for the bees to move up, depending upon the season. A better way would be to transfer the worker-combs during apple bloom, and thus save all that were worth saving.—DADANT & SON.

1. Try both ways. I should place the new frames on top. 2. As soon as the bees are strong enough to build the combs; give them all you wish them to have at once—a super full. 3. Very much depends, as regards all these questions.—JAMES HEDDON.

I should give the bees wired foundation in new hives as soon as strong at swarming time; then let brood develop, and when the three weeks had passed, melt up the old comb, after extracting the honey. In changing to reversible frames I have done just this, and very successfully. If desired, we can use only starters in brood-frames, and add sections at once. This gives the maximum amount of honey.—A. J. COOK.

When the bees get to be strong in the old hives, I should place the new hives on top with full sets of frames. 3. After the bees have drawn out the combs in the upper story, the queen could be smoked into it, and a queen-excluding honey-board put between the hives. After 21 days the lower hive could be extracted, and the combs melted into wax.—G. L. TINKER.

1. I doubt if the bees will occupy the frames of foundation in either case until their old brood-nest is filled, and they are crowded for more room. Without seeing them I am not sure what I would do, but I think I would straighten up all the combs I could in the old frames, or transfer them into new, and supply the deficiency with frames of foundation added as the bees could occupy them.—C. C. MILLER.

I should want to transfer by any well defined method. You will get no satisfaction unless you do. 2. Just as fruit blossoms begin to open, put in all the frames the bees will cover. 3. If left in the old hive they will not transfer their stores at all, in the way you propose.—H. D. CUTTING.

You can do as you say, and the best time to adjust the frames of foundation is right at the commencement of the early honey harvest. But your plan would not pay me. I would cut loose and straighten up all the best of the old combs, and supply with foundation what is lacking. I cannot afford to melt up good old combs because they are out of shape, as long as I can save money and time by putting them in order. 1. Why invert the old hive? 2. Why not put on an upper story with a full set of frames, with foundation on the brood-chambers just as it is, at the beginning of

the honey season? 3. Perhaps never. If I wanted to throw away the old combs, I would drive the bees about May 1 into new hives filled with foundation, like we used to drive them into empty hives 30 years ago.—G. W. DEMAREE.

If you must use "wired frames," you should put the new hive on the old one, but the bees will be slow to go up there until they have filled up below. Would it not save time and trouble to transfer them during fruit bloom, and save all the combs that are worth saving?—THE EDITOR.

Spring Management of Bees.

Query 411.—My hives last fall, when put into winter quarters, were full of honey, and I left all the frames in them. The combs at the sides of the hives now (March 12) are still full of honey. Would it be better to leave them in, or take out one or two on each side, and put in division-boards, or put in frames of foundation in their place?—KANKAKEE, ILL.

Leave the combs of honey as they are by all means.—G. L. TINKER.

Let them alone where they are.—JAMES HEDDON.

I should leave them in, in this locality.—G. M. DOOLITTLE.

Take out and crowd by use of the division-board. This is the sovereign remedy against spring dwindling.—A. J. COOK.

For cold climates, take out extra combs and make the hive snug and warm.—C. W. DAYTON.

Most likely your bees will need that honey before the clover crop. But if they really have too much, it had better be taken out.—DADANT & SON.

I do not know how many frames are in your hives, but I think it a fine thing to have full combs of honey in a hive on March 12.—C. C. MILLER.

Much depends. If there are center frames without brood, remove them, and replace with the full ones, putting "dummies" on the sides of the hives. Contract to as few frames as the bees can cover, and feed if necessary. Do not remove brood in any case.—J. E. POND.

A solid frame of honey is the best division-board ever made. For all practical purposes, if the colonies are strong in bees, leave them as they are.—H. D. CUTTING.

If there is more honey in the hive than the bees will use, it is just so much dead capital; if you can make any use of it, take it out and put in division-boards or "dummies." Do not put in frames of foundation, as they will be filled with honey in very poor shape for market, unless extracted; and then it is more convenient to have the surplus stored in an upper story. Why use hives so large?—W. Z. HUTCHINSON.

I would leave the honey where it is. If the queen needs the room below to enlarge her brood-nest, the workers will carry the honey above. This is one of my objections to sugar feeding, and a very serious one. When my brood-chambers are full of honey except the room occupied by the queen

for her brood, I am sure of the surplus being conveyed to the surplus department. In other words, a hive full of brood and sealed honey is "contracted" to as good effect as if division-boards occupied the place of the sealed honey, and with this advantage the bees do not have to be fed at the close of the season at a loss of bees and stores.—G. W. DEMAREE.

You risk nothing by leaving the frames of honey in the hives until honey is being gathered; then if there is too much for immediate use, remove it.—THE EDITOR.

Correspondence.

This mark \odot indicates that the apiarist is located near the center of the State named; δ north of the center; φ south; \diamond east; \circlearrowleft west; and this δ northeast; \circlearrowleft northwest; \odot southeast; and φ southwest of the center of the State mentioned.

For the American Bee Journal. The Medicinal Properties of Honey.

G. P. HACHENBERG, M. D.

Since the publication of my article on the "Medical Properties of Honey," in the AMERICAN BEE JOURNAL for April 26, 1886, I have received several letters asking for further information. The subject appears to have received special attention, by the profession in particular.

D. C. Spencer, M. D., of Augusta, Wis., makes this request: "Will you please to give, in the AMERICAN BEE JOURNAL, a list of authorities for the positions taken in your article, and also state how much and what parts were from original observations, and what were your data on which these were based?"

I reply with pleasure, and hope what I may be able to say in answer to the questions on the subject will prove satisfactory.

The general recognition of honey in the pharmacopoeias shows its high officinal position. The United States Dispensatory necessarily had to receive it as an officinal remedy, but unfortunately blotched it with a great error. It says: "Honey possesses the same medical properties with sugar, but is more disposed to run off by the bowels, and to occasion griping pain." What an unhappy contradiction by so high an authority! The deleterious effects referred to show at once that honey is something more than sugar. It may safely be assumed that all remedies that betray an untoward effect on the system, may be turned to a medicinal advantage. This explains why some of the most powerful "poisons" may serve us as the most efficient means to subdue disease. A tisane is no medicine—it may serve as a nutritive; but it is soon subverted by physiological operations; where, on the other

hand, it is the medicine that controls these operations.

There is another reason for regarding honey as something more than sugar. If the two were isomorphous, although identity of composition by no means implies identity of character, we would be less inclined to assail our august authority, but honey has one more equivalent of oxygen than has sugar, as established by Praut, Gay Lussac and Thenard; therefore the two are not alike to produce the same physiological effect. According to Draper, we have specific chemical tests to distinguish one from the other. Leibig's analysis of honey and sugar stands as follows:

	Carbon.	Hydrogen.	Oxygen.
Honey.....	36.36	7.09	56.55
Sugar.....	42.30	6.38	51.31

The chemists named, previously render the oxygen in sugar only about 50.00, giving still a greater excess of it to honey. I have no doubt, that on the law of chemical affinity, if the analysis could with strict accuracy be made, it would amount to one whole equivalent 8.013.

Honey has two specific effects in its route through the system in which it differs from other saccharine substances. The mellic acid in the honey (it is evidently this acid which is referred to in the American Cyclopaedia on the subject of honey), is an irritant, often distinctly felt in the throat after eating it. It is not always of uniform proportion in the honey. It has its beneficial function to perform, but when in excess, it poisons the honey, and like the Trebizond honey, may be dangerous to use. I know that poisonous honey is supposed to be derived from poisonous flowers, but of this I have my doubts. When honey is taken in the stomach, the mellic acid unites with the gastric acids and will excite and favor digestion. Especially advantageous, too, are its antiseptic properties, which, being more positive than sugar, tend little to gastric fermentation.

It is well enough to observe in cases of dyspepsia and idiosyncrasy, where the mellic acid does not receive the co-operation of the gastric acids to favor digestion, it may develop a strong, untoward effect, even to cause sickness. But such cases are not common, and upon the whole, honey is a wholesome diet, a good, mild medicine, and even a potent prophylactic of diseases. But the most important physiological action of honey in passing through the system, is its election for the liver, on which organ it expends the whole of its glucose material. Starch and sugar follow the same route, but only by means of a highly complicated operation. In the glycogenic process of the liver on honey, no special reconstruction is needed as is the case with starch and sugar. The latter have first to be converted into glucose, much like that of honey, before its assimilation in the liver. It is self-evident that this economy of labor on the part of the liver on honey, makes it an excellent hepatic with laxative and diuretic effects. There is perhaps no other

hepatic like honey, all others stimulate the liver into action at a certain vital expense; honey facilitates its operation on a reverse principle, that is, by lessening its labor, and still perform the normal amount of work.

It may here be proper to state that the mellic acid is hardly ever conveyed to the liver, but decomposed by the alkalinity of the chyle. Should it be taken to the liver, it would serve as an irritant to that organ, causing violent bilious vomiting and purging. The history of some cases that may be confounded with idiosyncrasy, I think will establish this as a fact. Honey leaves its highest blessing not only on the liver, but through its easy but thorough assimilation in that organ, it necessarily holds a healthy sympathy with the operations of the kidneys. By some fault of the liver, it may turn starch and sugar into glucose, but fail in the elimination, throwing the burden on the kidneys, often a most dire disaster, unfortunately too common, which would not take place by the use of honey.

In my article on the "Medical Properties of Honey," is given a full list of the same, both as a local and constitutional remedy. Perhaps the list has appalled Dr. Spencer. Of course they are not all of an immediate character, some are primary, some secondary and reflex, and of such nature as only Dr. S. and other medical scientists can determine. In determining the medical properties of a remedy, much depends upon circumstances, and the way a skillful physician prescribes it. For example, take ipecac. What is it? An *emetic*. Yet it cures vomiting, and thereby becomes an *anti-emetic*. In a disease of the lungs, you put the patient in bed, and it is administered as a diaphoretic and expectorant. Give it to one, and turn him out-doors, and it is likely to prove diuretic and hepatic. In fever, as a febrifuge; in cholera and convulsions, as an anti-spasmodic; in labor, as a parturient; in dyspepsia, as a tonic; in constipation, as an aperient; in diarrhea, as a sedative; in hemorrhages, as a constitutional haemostatic; in intermittent fever, as an antiperiodic; in hysteria, as a nervine; and in many forms of chronic diseases as an alternative, etc. It is often the case that the physician with suitable cases will mould his remedy to his purpose, as a potter does his clay; not only this, but doctors may all prescribe the same remedy for the same purpose, and they be like so many musicians playing the same instrument and the same tune, and yet no two play it alike.

It will be perceived now in what way I passed judgment on the medical properties of honey. The nature of a case often is as important a factor to determine the properties of a remedy, as the remedy itself.

Let us briefly refer to some of the authorities on our subject. Prof. John J. Reese, in his "American Medical Formulary," gives honey as a "demulcent and laxative, and used as a vehicle for other medicines." In Dungleson's Dictionary: "Honey is

employed as aliment, condiment, and medicine. It is demulcent and aperient, and is prescribed as an adjunct to gargles in *cynanche tonsillaris*, etc. It is used as a detergent to foul ulcers." The oxymel of the London and Dublin Pharmacopeias (made of honey and vinegar) is recommended as a "pleasant addition to gargle, and is sometimes used as a vehicle of expectorant medicines, and to impart flavor to drinks in febrile complaints." I know of a Texas physician that uses the oxymel, and nothing else, in the treatment of croup and other throat diseases, and, I am told, with wonderful success!

Where honey is used as an adjunct, it often has very fine and pleasant effects, such as the "Honey of Roses," "Honey of Borax," "Oxymel of Squill," etc., and other formulae of the kind found in the Pharmacopeias of the medical profession. It is interesting and suggestive to see the different preparations of honey that may now be found in the drug-market. In connection with the few already given, there is the Acetomel, Aloe, Anaphromel, Aquamel (Honey-Water), Aquamelis, Egyptomel, Ceromel, Depurated Honey Ph. Ger., Honey of Elder Flowers, Glycerated Honey, Hydromel, Rhodomel, Honey of Rhatany, Honey of Borax and Roses, Honey of Violets, etc. *Vide: Frederick Stearns & Co's "Pharmaceutical Catalogue."*

The place honey frequently takes in authenticated prescriptions demands our attention. I have had special facilities to examine this part of the subject. Having been for many years engaged on a "Consultation Prescription Book" which contains a full list of all the remedies with their posology and properties, etc., so far as I could, by large resources at my command, procure them; and many thousand authenticated prescriptions nosologically classified to cover not only each disease, but every stage and complication it may have. In this voluminous collection of material, I have carefully observed as author, physician and apiarist, in what manner honey was prescribed by the master minds of the medical profession. I may have perhaps a hundred formulae in my book, where honey was prescribed, in many cases as in the oxymel that could not well be replaced with any other saccharine material. It is with some pique, I have to say that nearly all of these honey prescriptions, like the oxymel, originated in Europe. It is evident that the honey in these prescriptions take the place both of a menstruum and a medicine—a chemical agent no other solvent has, except those of a violent nature. I have noticed in these formulae, that honey with Kusso, as an electuary for worms; with pepsin, as a tonic in preference to scharated pepsin; with chlorate of potash, for gargles; with mindererus, as a diaphoretic and febrifuge; with opium and assafetida, as an antispasmodic sedative and nervine; with sulphur and senna, as a laxative, hepatic and carthartic. In the analgesic prescriptions of Prof. Fenwick, of

England, in his "Outlines of Practice," there are several that contain honey in some form.

Now when, where, and why is honey used as an adjunct and solvent by choice? There are two reasons, one is to favor the assimilation of the base in the prescription, and the other is to associate it with remedies that in some way or another have, more or less, some analogous principles with it, either physiologically or chemically. The object is to maintain a compatibility of the different remedies in a prescription. Take any of the above examples where honey is given in connection with other remedies, we find that each is modified in its physiological force. It may give a keener edge to honey, and blunt the acridity of its associates. Here is a principle that involves the construction of all scientific prescriptions. For many reasons there is often a necessity of uniting remedies, as disease is a complex affair; but at the same time we must see the folly of polypharmacy, or what in common parlance is called "shot-gun medication."

In domestic practice, honey has been used for ages as an independent remedy for the treatment of some diseases. Physicians in the present age with their armamentarium of over four thousand remedies, make better, quicker, and surer work by associating it with other remedies.

But what is its actual physiological force as a curative agent? In referring to my "Consultation Book," where with the labor of years I made a proximate estimate of the "force" of each remedy, I find that I have assigned to honey 14, sugar 6, and starch 1. The scale runs from 1 to 100. The higher the figure the more powerful the medicine. The force of Prussian acid is represented at 97. Honey here stands rather high in the scale as a mild remedy, but mainly on account of its local effects. Constitutionally administered, on Leibig's theory of the disposition of sugar in the system, I would make it 10, leaving it still higher than sugar, on account of the behavior of its mellic acid in the stomach. But without the acid in its assimilation, which is much more readily effected than sugar, it would fall below sugar and stand at 4! The importance of this arrangement is clear, as it greatly lessens the chances of making a mistake in prescribing powerful remedies. A glance is sufficient to make an intelligent estimate of the power of any drug, and with full security, which the reading of many pages on the subject may not always do, to say nothing of the loss of time.

The biblical history of honey leads us to think that it is not held in the same general estimate in the present age that it was in the earlier ages of the world. But from the present condition of things, we have every indication that it is about to regain its former appreciation from mankind. I am no prophet, nor the seventh son of the seventh son, yet I cannot resist the temptation to show you the chick that lay in the egg, in my last article

on this subject—when speaking of honey as a prophylactic. Honey is destined not only to take an important place in medicine, but in *state medicine* in particular. As a prophylactic, it will turn up as a giant in the way to stay the march of epidemics. Why this extravagant idea? You know well enough, Dr. S., that in the case of a victim of cholera, yellow fever, or of any other acute malignant malady, it is the liver that receives the first blow—the glycogenic process is stopped or greatly impaired, suppression of the urine follows with a dire train of symptoms all pointing to the grave. If our theory is correct as to the behavior of honey in the liver, honey is to the liver what oil is to machinery; the wear and tear of epidemic influences on it will do it little or no harm. Of course the protection is only secured by the daily use of honey as a diet, previous to the exposure of sickness. When the damage is once done, honey or any other remedy may fail to save the patient. The golden rule in medicine is, "Prevention is better than cure."

Austin, \odot Texas, Feb. 21, 1887.

For the American Bee Journal.

An Experiment on Ventilation.

C. W. DAYTON.

Last fall I prepared an apiary of 112 colonies for wintering, by covering them first with forest leaves, and then with 8 inches of earth. A passage-way was provided from the entrance to the outside air, and a small space of the leaves at the top of the mound were left uncovered with earth, to allow upward ventilation, and the escape of moisture. The open space of leaves was protected from snow and rain by a hive cover. I should have said that 72 colonies were arranged in this way, and the remaining 40 were the same except that the leaves were entirely covered at the top, so that all chances for upward circulation was cut off.

They were doomed to a confinement of 150 days. On making examination on April 2, the 40 colonies were found dead, and 69 of the 72 were alive to enjoy a flight. Such long winters are almost enough to disgust the apiarist, and drive him from this northern country to continue his avocation; but when he realizes that it is so benefiting to the honey market, he is considerably relieved.

In many of the dead colonies I believe there had not been live bees for months, as but little of the honey had been consumed. Several combs where the honey had been taken out, contained 4 or 5 pounds of water. Four colonies that were in one end of long hives, while the other part of the hive was stuffed with leaves, showed the good effects of the space into which the moisture escaped. A few of the dead colonies left the combs and hive clean and nice, but the majority befouled the hive and combs that affords a chance for "frame scraping," and

the microscopist to charge his instrument for large game.

There was but little if any signs of brood-rearing. Those colonies that had the most upward ventilation seemed to have fared the best. Their cold and devitalizing condition brought them out all right; however, I hardly think they suffered much with the cold, as I think they were able to generate sufficient warmth for comfort, and some to spare.

It should be remembered that the more porous the coverings are, the requisite amount brings equal warmth and a drier condition.

Bradford, δ Iowa.

From the Canadian Bee Journal.

Combinations for Honey-Producers.

J. M. HICKS.

When viewed from a practical stand-point, this seems to me a step in the wrong direction, especially so if we are allowed to judge of other combinations, such as Boards of Trade, Railroad Corporations, and many others I could mention of which I do not wish to leave unnoticed, the Coal Oil and Express Combinations, all of which have and are still continually sacrificing every principle of justice in order to accomplish their cunningly devised plans of injustice toward the many. These things will, at some future time, be more fully noticed and properly managed by the masses. Such corporations seem to flourish like the "green bay tree" for a while, but *God is just*, and will, doubtless, put it into the hands of His people to rectify these inhuman wrongs now exercised by almost every organization in existence. It has for many years been the custom of many honey-producers to consign their crop to some commission dealer in some city, for instance, one C. O. Perrine, of Chicago, who used to deal heavily in pure honey as furnished by the bee-keepers, as well as much of his own bogus production added, in order to make more extended sales.

More than once have we seen his bogus productions in glass jars and tumblers for sale in the grocery stores of our own Hoosier State. Mr. C. O. Perrine was not alone in such dealings, as well as quoting honey at certain figures, far below the actual sales made.

We also find for several years past the quotations of honey (not glucose) have been very low, by the various commission men in many cities, especially in Chicago and Cincinnati; at the same time I retailed all the honey I could produce at 20 cents for extracted and 25 cents per pound for comb honey. And at this writing I have disposed of my 1886 crop at 20 cents per pound, something over 4,000 pounds, all of which has been sold direct to the consumer, and not a pound went into a grocery store or to a commission merchant.

I have long since found that it takes industry to produce, as well as to sell honey at a paying price. The former

commodity (industry) does not in a very great degree abound among the commission men of the present day, except at the expense of the producer, hence every producer can well afford to be his own salesman, provided always he desires good and reasonable returns for his honey. It seems to me after many years of close observation and contrasting the past with the present state of things, that it would be vain for the bee-keepers of America to try such a scheme as heads this article. It is a true saying, and worthy of full consideration, that even in all such combinations, the big fish eat up the little ones, and the stock goes up or down as the case may be. But one thing is sure, that the little fish soon find themselves far in the rear of the sharks, which has been, and is yet, the order of the day among all combinations, and the many suffer at the hands of such organizations; hence I for one, am opposed to all movements, especially so, when they have such a strong tendency of becoming a monopoly, which, if once organized, would have no other object in view than to control the honey trade, as against the consumer and directly in the interests of such organized monopoly. In fact, so far as our commission honey dealers at this date are concerned, it almost amounts to the same thing; a few of whom have control of the trade now in their locality, and we often hear of sad complaints from parties who make consignments, failing to receive enough in return to pay ordinary expenses of production.

Battle Ground, \odot Ind.

Well done, friend Hicks, you need no combination to boom price for you. We wonder how many more of our bee-friends will see the necessity of establishing a home market, by allowing no person, whether rich or poor, to go without a supply of honey, at all times of the year, if effort, honest dealing and good honey will secure it. Bee-keepers have been giving their attention too much to cities and towns, and allowing the rural population to go without. We have never known an instance, where the proper effort was put forth and the best management adopted, that honey could not be sold in much larger quantities. There is not one quarter of our territory where honey might be sold, occupied to-day. In one district where a house-to-house canvass is being practiced, the sales are increasing at every round; in fact the canvasser is himself astonished at the large quantities he is able to sell, and after paying the ordinary wholesale price for it, finds he can make more money in that way than he could by hiring by the day or month. Of course he is well suited to his occupation. How many thousands of ladies and gentlemen have we idle at the present time, or earning very small wages, who, if they could embark in the sale of honey and apply themselves with the same diligence, might secure a much better living? and who could refuse to buy honey from a lady? Any who embark in this business and en-

deavor to succeed, will be conferring a benefit on the bee-keeping public. What you say in reference to placing our honey in the hands of men who adulterate, cannot be put too strongly, for, no doubt, great injury is done to our market by these men. It is quite a common thing in London to see large shipments of honey from America and other places sold at 3 to 5 cents per pound.—ED. C. B. J.

[There are two sides to all debatable subjects. The above presents good reasons for doing what the AMERICAN BEE JOURNAL has for years advised—that of building up local markets in every village and hamlet in America, and we still believe that to be the true solution of the difficulty.—ED.]

seemed to abate, so that, in 1868, bees were quite common again.

As 1868 was a splendid honey season, bee-talk was rife in this locality, which again brought to life old ambitions which had been crushed out by the former loss by disease among the bees, so that the spring of 1869 found Mr. D. with 2 colonies of bees of his own, as the starting-point to his present apiary. Wishing to know for himself all of the minutiae of this (to him) interesting pursuit, he procured nearly all the bee-books of that day, and subscribed for the bee-papers. As his ambition led him toward the practical side of bee-keeping, Quinby's "Mysteries of Bee-Keeping Explained" was his favorite, the pages of which were as familiar to him as a nursery rhyme. His intense desire to learn and investigate the bees in

claiming that around the queen centered all there was in bee-keeping, which has caused the subject of this sketch to study along the line of queen-rearing to a much larger extent than any other part of this interesting pursuit, and it is believed by him that much of his success as a honey-producer has come from this, and his ever-anxious care to get the hive filled with brood at such a time that there would be multitudes of field-bees at the opening of the honey harvest.

[Mr. G. M. Doolittle, whose likeness is on this page, is one of the most successful and practical of American bee-keepers, and has a world-wide reputation assuch. He is well-known as a writer for all the American bee-periodicals, and faithfully gives his plans and methods to the public year after year. He is genial and companionable, and one of America's sons that she is proud to own and honor.—ED.]



From Gleanings.

Gilbert M. Doolittle.

A NEIGHBOR.

G. M. Doolittle was born April 14, 1846, near his present location, in the town of Spafford, Onondaga County, New York. His parents were natives of Connecticut, and moved to this State a few years before he was born; hence the thoroughness, energy and activity of the "Yankee" are largely manifested in the subject of this sketch. From his earliest youth, Mr. D. has been an admirer of the busy bee, taking great interest in them when kept by his father. Later on, nearly all the bees in this section of country perished with foul brood, so that from 1856 to 1862 a colony of bees was a rarity. After this the disease

every particular has been such that he has dreamed of them at night, and thought of them in his working hours to almost an absorbing extent, and to-day he is still a student, believing that there are many unexplored regions, and much room for the deepest thought, even on the practical part of this pursuit.

In the first years of his apicultural study, Elisha Gallup, then living in Iowa, gave him by letter much practical instruction, which, together with Gallup's articles in the different papers of that time, so grew into his life that he went by the name of "Gallup" among bee-keepers about him for several years; and to-day he is often heard to say that there never has, to his mind, been a greater man in the realm of bee-keeping than E. Gallup. Gallup, in his private letters, laid great stress on good queens,

For the American Bee Journal

Sections Filled with Comb.

C. H. DIBBERN.

I have carefully read the articles of Mr. Hutchinson, on page 200, and Mr. Thielmann, on page 201. Mr. Hutchinson has hit the nail on the head squarely, when he says: "I can think of one reason why honey stored in drawn comb might remain longer unsealed, than that stored in foundation, that was drawn but slightly in advance of the filling; i. e., the drawing out and filling were both in progress at the same time. The opportunity for ripening is greater when the honey is not very deep in the cells." That is just the conclusion I came to, after years of experimenting. But the fact, that honey stored in full, drawn comb is more apt to sour than that built by the bees or drawn from foundation, is not my only objection to the use of such combs.

In an apiary that is run on correct principles, there will be few or no combs built during the white honey harvest to carry over to another year to be refilled. Then it is the combs mainly built late in the season that are extracted and carried over. Now it is well known that comb partakes largely of the color of the flowers on which the bees are working at the time. Such combs are usually dark or yellow, and heavier than those built in the white clover season. Then, too, the wood of the sections is always more or less soiled, either by propolis, honey that has leaked out, dust, bleached out by light, or stained by getting wet. It is almost impossible to get such sections to look as neat and clean as new ones.

Mr. Thielmann seems to think that my trouble with old comb arises from the fact that I did not have the bees clean them up immediately after extracting. Now if this was the one

thing needful, then Mr. Thielmann and other writers should always state this, as other wise bee-keepers, who have not "progressed" as far as he thinks he has, might ruin their honey crop, as he admits that honey will sour in the combs unless cleaned by the bees the previous fall. Well, I tried that plan some years ago, but I could see no difference between combs cleaned up by the bees in the fall, or cleaned but by the bees in the spring, as they will clean them up thoroughly before they will put a single drop in. I also found it a nice job to get the bees out of the sections a second time in the fall. Sometimes they would literally pack themselves into these empty combs, and neither smoke nor shaking had much effect on the benumbed bees, during cool days. Now as I could see no particular advantage of fall-cleaned-up combs over spring-cleaned ones, I concluded that this extra work was very much like "puttering."

My only object in calling attention to this subject is to induce bee-keepers to be more particular, and produce a better quality of honey. Since I have discarded the use of old combs, I use nothing but new white wood sections, with separators between each comb, I have built up a demand for my honey that is far beyond my ability to supply. During the past season I could have sold many thousands of pounds after my 10,000 was gone, could I have obtained such honey as I produced.

Mr. Thielmann seems to think that I could not distinguish the sections that had been filled with old comb, but I venture to say that with me, nine out of ten would grade "No. 2." Mr. T. says that in extracting he shaved down all uneven or bulged combs, which shows he does not use separators, another fatal defect in a progressive bee-keeper. Now if he would shave these combs down so they would not be over $\frac{1}{4}$ -inch thick, it would be about equal to good foundation, and would do away largely to my objections to old comb.

Mr. T. makes one extraordinary statement, viz: "Many times the bees will fill a case before they would enter one with only foundation in the sections." Now I will admit that the bees will fill the empty combs a little quicker, but when filled they seem to hesitate about sealing it up, seeming to know that it is not sufficiently ripened to be capped. I have watched combs, side by side on the same hive, one of foundation and the other comb, and the first would have every cell capped the soonest. Indeed, the bees often persistently refuse to cap cells near the wood at all, in these comb-filled sections.

I am glad that I have attracted attention to this subject; we want to get at the truth of the matter. I want to hear from Mr. Heddon, Dr. Miller, Mr. Pond, and also further from Mr. Doolittle, Mr. Dadant and others. I have no interest in the matter, only that I desire the production of the very best comb honey. The trouble is in old sections and combs; we first use the best, and

soon those that are not so good, and by-and-by we are found using the bad. We all know the result—dirty sections, bulged combs, honey souring and running all over everything, disgusting dealers, low prices, dissatisfied consumers, and "blue" bee-keepers.

Milan, &c Ills.

Irish Farmers' Gazette.

Races of the Honey-Bee.

H. W. LETT, M. A.

I submit the following description of ten different varieties of the *Apis mellifica* which are kept in hives:

I—BLACK OR BROWN.—The ordinary hive-bee or honey-bee, called by the way of distinction, the black or brown, from being almost one uniform brown-black color, with slight indications of paler bands on the abdomen, and clothed with grayish brown hairs. Until within the last fifteen years, no other bee was known in north or west Europe. This bee, after escaping, has made itself wild in the American and New Zealand woods.

II—ITALIAN ALP.—The Italian Alp bee, sometimes called Ligurian, is indigenous to the mountainous district that lies in the north of Italy round about the lakes Maggiore and Como. It is of a light orange yellow color, with two orange red bands on the abdomen, and is longer and more slender than the black. They are better honey gatherers, more hardy and prolific, and very courageous in defending their own hives, even from the ravages of the wax-moth.

III—CYPRIAN.—The Cyprians are natives of Cyprus and part of Turkey in Asia. They are yellow, quite slender, wasp-like, and smaller than Italians. They always have a yellow shield mark on the back between the wings. They are strong, excellent honey gatherers, winter better than any other race, and are proof against being robbed by other bees. But they are easily excited, and most revengeful stingers.

IV—SYRIAN.—The Syrian bees are found on that part of Asiatic Turkey which lies north of Mount Carmel. They are of the same size, qualities, and temper as the Cyprians, from which they differ in showing less yellow, and being on the whole of a grayer color over their whole bodies. They are quite distinct from the next variety.

V—HOLY LAND.—The Holy Land, or as the natives call them, the Holy Bees, are found in Palestine, south of Mount Carmel. They are marked like the Cyprians, but their hair is so light in color they appear to be beautifully striped. Their size is smaller than Italians, but larger than Cyprians. They are very active and far-flying, most wonderful cell builders, and get honey from red clover; but they are ready to sting, become furious at the least smoke, and run off their combs when one is lifted from the hive.

VI—TUNISIAN.—Tunis, on the north of Africa, has a peculiar race of bees. They are the same in size as the Cyprian and Syrian, but their color is dark brown—even darker than the common black or brown. They are active workers, keep on the combs when being handled, and bear smoke better than other Eastern races; but they are liable to attack a person coming near them, even though not interfered with.

VII—CARNIOLAN.—The Carniolan bees are natives of Carniola, in South Austria. They are longer and thicker than the black or brown, being the largest domesticated European bee. The color is a rich, dark brown, nearly black, while each ring of the abdomen is clearly marked by whitish-gray hairs, giving it a silvery look. They are equal to Italians in honey gathering, fecundity and hardiness, while they are of a most remarkably gentle disposition, never attacking the manipulator, except when they are treated with improper roughness.

VIII—HUNGARIAN.—The bees peculiar to Hungary are the same size of, but far blacker than the common brown. They are very fair honey gatherers, and as gentle as Italians, but their propensity to swarm renders them very uncertain and unprofitable.

IX—EGYPTIAN.—The Egyptian bees are like Syrians in size, but quite yellow, like the Italians. They abound, both wild and in domestication, along the valley of the Nile, and while famed for good honey gathering qualities, are without exception the most ferocious bees known outside of India.

X—SOUTH AFRICAN.—There is an excellent race of bees, both wild and hived, in the Cape Colony, which it is to be hoped will soon be introduced to our bee-keepers. They are the size and color of Italians, but grayer, while they are more tractable, and at the same time very prolific, and of remarkable working powers; where honey is to be gathered, they keep at it early and late, and often are at work even by moonlight.

It is from the best of these races that the advanced bee-keepers of the world are now endeavoring to concentrate in one strain those characteristics which commend themselves as desirable in the best bred bee. And it may be safely stated that the honey-bee of the future will be as superior to the bees known to us twenty years ago, as a pure Shorthorn is to an old brindled cow.

County Down, Ireland.

To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, \$2.50. Five hundred will be sent postpaid for \$10.00; or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

Local Convention Directory.

1887. Time and place of Meeting.	
May 4, 5.—Texas State, at McKinney, Tex.	B. F. Carroll, Sec., Dresden, Tex.
May 5.—Progressive, at Bedford, Ohio.	Miss Dema Bennett, Sec., Bedford, O.
May 5.—Sheboygan County, at Hingham, Wis.	Matte B. Thomas, Sec., Sheboygan Falls, Wis.
May 10.—Keystone, at Scranton, Pa.	Arthur A. Davis, Sec., Clark's Green, Pa.
May 10.—Cortland Union, at Cortland, N. Y.	D. F. Shattuck, Sec., Homer, N. Y.
May 24.—N. W. Ills. & S. W. Wis., at Rockton, Ills.	D. A. Fuller, Sec., Cherry Valley, Ills.
May 26.—West Lake Shore Central, at Kiel, Wis.	Ferd Zastrow, Sec., Millhome, Wis.
Dec. 1.—Michigan State, at East Saginaw, Mich.	H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.



Successful Wintering of Bees.—I. A. Travis, Lyons, Wis., on April 13, 1887, says:

I put in the cellar last fall 110 colonies of bees, and on April 2, 1887, I took out 109 colonies, all in good condition. The one that died, starved but a few days before I put them out. Is this not doing well?

Feeding Honey in Musty Combs.—A Subscriber at Prophetstown, Ills., asks the following:

I have lost several colonies of bees from diarrhea, their combs being left in a musty, bad condition. Is there any danger of the bees contracting disease, if this honey is fed to healthy colonies?

[No; it will be as good as any for spring feeding.—ED.]

Gathering Pollen.—S. Burton, Eureka, Ills., on April 16, 1887, says:

My bees have wintered on the summer stands all right, except one colony that I neglected to pack as I did the others. I had 15 colonies, and I now have 14 that are good and strong. They have been gathering natural pollen for several days. My bees are pure Italians, hybrids and blacks, in separate hives.

Spring Protection of Bees.—Mrs. H. Hills, Sheboygan Falls, Wis., on April 14, 1887, says:

If the Rev. Wm. F. Clarke could look in my hives to-day, he would see how the uninstructed mind was obliged to solve that problem, "spring protection," and did succeed in "killing two birds with one stone," by securing, at the same time, "contraction of the brood-chamber." I had 2-inch chaff division-boards at both sides and ends of ordinary Simplicity

hives, with frames crosswise, and frames hung lengthwise in winter and spring. It took all my first year to climb that (to me) almost insurmountable obstacle. The plan involves a world of work and bother, but it is perfectly successful. No dead bees or moldy combs are in the hives, and no spring dwindling!

Building up Starving Colonies.—T. F. Kinsel, Shiloh, Ohio, on April 14, 1887, says:

Last fall when putting my bees into the cellar I found 8 weak, light colonies. These were set aside by themselves, so they could be fed, if necessary. The middle of February I made an examination and found these 8 colonies starving. I took a frame of sealed white clover and basswood honey and inserted it in the centre of the cluster. They soon became quiet again, and are as good to-day (put out of the cellar on April 2, and on April 8 I finished) as any. All my bees spotted their hives when put out; these 8 certainly no more than the others. My cellar can be kept at 38° to 42° Fahr. All the colonies had brood when put out of the cellar, and some of it was capped.

Swarming Expected Soon.—F. L. Merrick, Waldron, Ills., on April 14, 1887, says:

My bees were packed on the summer stands, and all came through the winter in fine condition. They are bringing in pollen lively. They had an abundance of honey, but I commenced feeding in February. I think some of them will swarm within 30 days.

Wintered without Loss.—L. Reed, Orono, Mich., on April 14, 1887, writes:

On Nov. 15, 1886, I put 54 colonies of bees into the cellar in good condition. I have been putting them out, a few at a time, since April 9; to-day I put the last out, all having come through in splendid condition—no disease, no light colonies, and all strong in bees. We have had a steady winter, with sleighing up to April 1. We are having nice weather now, the mercury being up to 70° in the shade to-day, and has been there a few days before. Bees are carrying in pollen to-day. White clover is starting nicely, and prospects for a good honey season are fair.

Favorable Spring for Bees.—Mrs. L. C. Axtell, Roseville, Ills., on April 14, 1887, writes:

My 202 colonies of bees are in fine condition for this time in the spring. Five colonies were lost from out-door wintering, but all except one that was stolen was due to carelessness in preparing them, as all that were prepared properly, and had queens, are in good condition. There was no loss in the cellar-wintering of 113 colonies; 4 are queenless, but fair colo-

nies, and I shall not unite them with others, but supply them with eggs from other colonies, as I shall soon need to make up nuclei, and they are fair colonies. I secure excellent results in giving a space of an inch or more below the brood-combs in winter, as then they never get clogged up as they formerly did. Of those wintered in the cellar, we raise the front board of the hive, giving a large entrance. The bees taken out of the cellar on March 1 have from 3 to 4 combs of capped brood, and plenty of bees to keep them warm. Those just taken from the cellar have but very little brood, and about the same number of bees. This spring has been very favorable to putting bees out early, as there has been but very little severe weather since March 1.

Disagreeable Weather, etc.—Abe Hoke, Union City, Ind., on April 19, 1887, says:

This is a beautiful morning; but yesterday was a very disagreeable day, as it snowed all the afternoon. It was cold last night; the snow was 3 inches deep. In my letter on page 235, I am made to say that I had not lost an entire colony in three winters. It should have read, "in three winters in straw hives;" for I lost 13 colonies in wooden hives during the winter of 1885-86, which I reported to the BEE JOURNAL.

[*"In straw hives"* was omitted, by an oversight of the printer.—ED.]

Honey and Pollen Yielding Trees.

—In reply to a question in a private letter from Mrs. H. Hills, of Wisconsin, in regard to alder, soft maple and poplar yielding honey and pollen, Prof. A. J. Cook says:

The alder yields some honey and much pollen. The maples—all of them—yield richly of both honey and pollen. Had we populous colonies at this season of the year, we should find the maples among our best honey-plants. Poplars and willows certainly furnish nectar as well as pollen.

My Experience with Bees.—Frank Andrews, Smethport, Pa., on April 18, 1887, writes:

I commenced keeping bees in 1882; got my start by taking 4 colonies on shares. I kept them only one year, as the owner would not furnish half of the hives. We divided them, and I had 3 colonies of my own in the spring of 1883. The spring of 1886 I had 22 colonies, and last fall I had 42, and 2,756 pounds of honey, about half of it being comb honey in one-pound sections. I have lost no bees in wintering, had one colony given to me, and now have 43 very strong colonies. I winter my bees on the summer stands, and do all feeding in the fall. I keep them as warm as possible through the winter and spring until they swarm. I obtained 185 one-pound sections of honey from one

colony; this being the largest amount from one colony ever secured in this locality. This colony is a black one; I got it 2 years ago last September from a tree which had been cut down and the honey removed. Their queen is still alive. The colony has never swarmed. I have 12 of this queen's daughters; they are very gentle. I also have Italians and Holy Land bees, but none of them ever produced more than 124 pounds of honey. The Holy Land queens mated with black drones are the crosest bees I ever saw. I have one colony that I always chloroform. I worked them for extracted honey last year, and the honey of this one colony sold for over \$20. I shall kill the queen of this colony if I can ever find her again.

Losses of Bees in New York.—O. L. Whitcomb, Argyle, N. Y., on April 15, 1887, says:

There is a fearful mortality among bees in this section this winter. Our cold weather and snow covers a period of 5 months already, with May to hear from. I started in the fall with 8 colonies, and have 2 colonies left. "Eighty colonies out of 150" is one man's loss within two miles—a discouraging outlook.

The Cappings over Honey.—C. P. Dadant, Hamilton, Ills., writes:

Mr. Hutchinson (on page 232) now bases his arguments, mainly, on the reports of some distinguished apiarists who found "honey so thickened that it did not fill the cell more than half full." I do not wish to be understood as disputing this statement, but I do say that I believe it comes from mistaken observations. Let Mr. Hutchinson take a can full of honey, no matter how thin, when sealed by the bees, and whenever he succeeds in evaporating it, by whatever process, until the can is only half full, I will silently, and willingly, give up.

Bees Packed in Sawdust.—W. Z. Hutchinson, Rogersville, Mich., on April 14, 1887, says:

Bees have come through in excellent condition. I have 110 colonies; 80 are packed in sawdust, as recommended in the first chapter of my little book.

Protecting Sections from Propolis.—Mr. J. J. Roe, Buchanan, Mich., writes:

While taking off honey last summer I saw the desirability of a section-case which would better protect the sections from propolis. I thought of a blank strip to correspond with the sections, and had some of that kind made. I then made up a hundred cases, and thought I would not give the invention to the public before testing it in my own apiary. This spring I received a catalogue from the dealers in bee-supplies, who made my cases, which advertised my invention. I thought *perhaps* the

dealers got the idea from the work they did for me. I thought I would get a patent, and so I sent a model to Washington. On page 232, Messrs. J. W. Powell & Son have illustrated almost exactly my invention. My case is reversible, and for Simplicity of construction I do not think it can be excelled. If Messrs. Powell & Son invented their case before I did mine, I willingly make my bow to them; if not, will they please make theirs, etc.

[It is only a waste of money to attempt to patent the "blank strip to correspond with the sections," to keep the sections free from propolis. As we stated in an editorial item on page 147 of the AMERICAN BEE JOURNAL for March 9, 1887, we have several of such "protecting strips," in different patterns, in our Museum, which have been there for years, and antedate both Mr. Roe and Messrs. Powell & Son—the only difference being the use of one of these strips at the top as well as on the bottom of the "cases" by Messrs. Powell & Son. The "cases" in our Museum were each described in the BEE JOURNAL, when received.—ED.]

White Clover in Bloom, etc.—John H. Christie, Dyersburg, Tenn., on April 18, 1887, writes:

Bees have wintered pretty well in this part of Tennessee. The winter has been very mild. My bees brought in pollen on Jan. 31. They got along very well until the last cold spell, then the most of the colonies stopped breeding, and some of them run short of stores so that I had to feed them some. I have had 4 swarms so far, all from one colony. It cast the first swarm on April 2, then one on April 10, another on April 12, and the last on April 14. They are about $\frac{1}{2}$ Italians. I saved all of the swarms, and they are all doing well. I have heard of a good many swarms throughout the country; I had ripe strawberries on April 15, and saw some white clover bloom to-day—both in the open country. I am 68 years old to-day, and have kept bees about 25 years. I have about 100 colonies in all.

Two Feet of Snow on the Ground.—J. F. Latham, Cumberland, Me., on April 14, 1887, writes:

At this date there is a greater body of snow on the ground than I have ever known at any corresponding date before. Although bare spots are beginning to appear in the open land, there is still about 2 feet of snow in the woods. The past winter has been of unusual severity, cold and blustering. Feb. 9 was fair and mild, as was also Feb. 16 and 19; then it was very severe until March 12, when it began to moderate again. On March 13 and 14 all of my colonies of bees, that seemed to need it, enjoyed a cleansing flight. About a dozen colonies

remained quiet. Three colonies have evinced no desire to fly during the winter, but are apparently in a most satisfactory condition, dry, cozy and comfortable. Six colonies soiled the entrances to their hives before their flight, but not badly. Everything considered, I am well satisfied with the *status* of all of my colonies at the present time, as they have been working "with a will" on rye-meal for the past five days, from every hive. Pollen on the willows is beginning to make its appearance, which makes me feel like reporting "50-50," but as it is I will wait until spring, and then see how many colonies I have.

No Rain for Two Years.—W. G. Ponton, Corwin, Tex., on April 9, 1887, writes:

"Texas against the world for honey," is what one of our Lone Star bee-keepers has said. I really do not know whether this is correct or not, but I would state it thus: Texas against the world for drouth. We have not had a good rain since the spring of 1885, and 1887 is coming in more gloomy than ever. Wheat and oats are considered a complete failure; there is yet hope for corn, should we get a good rain this month, and yet, considering the great drouth, bees are doing remarkably well, owing to the peculiar flora of this country, which makes it *par excellence* for the production of honey. All we need is enterprising apiarists. Bee-Keeping is conducted here according to the log-gum system. Every Saturday a very spicy visitor calls about 11 a.m., in the shape of the AMERICAN BEE JOURNAL, heaping full of good news.

Wintered Well in the Cellar.—F. A. Gibson, Racine, Wis., on April 18, 1887, writes:

My bees have wintered in splendid condition, having lost none. They were confined from last Thanksgiving Day to April 9, without having a flight. They did not spot the hives any when put out. There were such large clusters of bees hanging from the combs that I had to shake them off to get the bottom-boards on. They commenced carrying in pollen the next day after being put out. The temperature was at 41° in my bee-cellars when I put them in, and continued so until I removed the bees. The cellar is under the honey-house, bricked up, with an air-space all around it, and 10 inches of sawdust on top, between two floors. The bottom floor is of cement, closed by double doors from outside.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two new subscribers besides his own, with \$3.00, for one year, we will present a copy of this valuable book.



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 At One Dollar a Year.

ALFRED H. NEWMAN,
 BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Preserve your Papers for reference. If you have no **BINDER** we will mail you one for 60 cents, or you can have one **FREE** if you will send us 3 new yearly subscriptions for the **BEE JOURNAL**.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the **BEE JOURNAL**, and will send two or more free of cost to any one who will use them, and try to get up a club.

We will Present Webster's Dictionary (pocket edition), and send it by mail, postpaid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

One Dollar invested for the weekly visits of the **AMERICAN BEE JOURNAL** for a year, will richly repay every apiarist in America.

Red Labels for one-pound pails of honey, size 3x4½ inches. — We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

System and Success.

¶ All who intend to be systematic in their work in the apiary, should get a copy of the **Apinary Register** and commence to use it. The prices are reduced, as follows:

For 50 colonies (120 pages) \$1.00
 " 100 colonies (220 pages) 1.25
 " 200 colonies (420 pages) 1.50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Leaflet No. 2, entitled "Alslake Clover for Pasturage and Hay," is now ready for delivery. This should be scattered into every neighborhood, in order to induce farmers to plant Alslake, that the bees may have the advantage of it for pasturage. We send them by mail 50 copies for 30 cents; 100 for 50 cents; 500 for \$2.25—all postpaid. It will pay bee-keepers to scatter these Leaflets, even if 9 out of 10 avail nothing. If ten farmers out of a hundred plant Alslake in any neighborhood, the bees will reap a very substantial reward.

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the **AMERICAN BEE JOURNAL** for one year, will be clubbed for \$1.25.

The Production of Comb Honey, as practiced and advised by W. Z. Hutchinson, can be obtained at this office, for 25 cts.

¶ Sample Copies of the **BEE JOURNAL** will be sent **FREE** upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

Do you Want a Farm Account Book? We have a few left, and make you a *very tempting offer*. It contains 168 pages, is printed on writing paper, ruled and bound, and the price is \$3. We will club it and the **Weekly BEE JOURNAL** for a year and give you both for \$2. If you want it sent by mail, add 20 cents for postage.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

OUR CLUBBING LIST.

We supply the **AMERICAN BEE JOURNAL** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both, Club
The American Bee Journal	1.00
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Rays of Light	1.50 1.35
The 7 above-named papers	5.25 5.00
and Cock's Manual	2.25 2.00
Bees and Honey (Newman)	2.00 1.75
Binder for Am. Bee Journal	1.60 1.50
Dzierzon's Bee-Book (cloth)	3.00 2.00
Root's A B C of Bee-Culture	2.25 2.10
Farmer's Account Book	4.00 2.00
Guide and Hand-Book	1.50 1.30
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A Year Among the Bees	1.75 1.50

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Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the **BEE JOURNAL**. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the **BEE JOURNAL** to any one sending us three subscriptions—with \$3.00 direct to this office. It will pay any one to devote a few hours, to get subscribers.

By Using the Binder made expressly for this **BEE JOURNAL**, all can have them bound and ready for examination every day in the year. We have reduced the price to 60 cents, postpaid. Subscription for one year and the binder for \$1.50.

Dr. Miller's Book, "A Year Among the Bees," and the **BEE JOURNAL** for one year, we will club for \$1.50.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Sellers ask from 7 to 10 cts. for anything off in comb honey; this includes dark undesirable and crooked combs, and 2-pound sections. Good 1-lb. sections, 10@12c.; choice, 12@13c. BEESWAX.—25c. R. A. BURNETT, 161 South Water St.

DETROIT.

HONEY.—Best white comb, 11@12c. Market is improving. BEESWAX.—23c. M. H. HUNT, Bell Branch, Mich. Apr. 11.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 4@4c. Comb, white, 7@13c. Market firm. BEESWAX.—Scarce at 19@22c. Apr. 4. SCHACHT & LEMCKE, 123-124 Davis St.

CLEVELAND.

HONEY.—Choice white in 1-lb. sections, 12@13c.; second quality, 10@11c.; and buckwheat unsalable at 9@9c. Extracted, 5@6c. BEESWAX.—25c. Apr. 20. A. C. KENDEL, 115 Ontario St.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3@4c. Extra fancy, 5c. more than foregoing price. Extracted, 4@5c. Market dull. BEESWAX.—Firm at 21c. for prime. D. G. TUTT & CO., Commercial St.

SAN FRANCISCO.

HONEY.—We quote: White comb, 12@14c.; amber, 7@9c. Extracted, white, 4@5c.; light amber, 5@6c. Market quiet. BEESWAX.—19@22c. Apr. 16. O. B. SMITH & CO., 423 Front St.

BOSTON.

HONEY.—1-lb. packages of white clover honey at 12@15c.; 2-pounds at 11@13c. Extracted, 5@7c. Sales slow. BEESWAX.—26 cts. per lb. Apr. 22. BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI.

HONEY.—We quote for extracted, 3@7c. per lb. Best comb brings 11@14c. per lb. Demand fair. BEESWAX.—Good demand, 20@23c. per lb. for good to choice yellow. Apr. 21. C. F. MUTH & SON, Freeman & Central Av.

MILWAUKEE.

HONEY.—We quote choice 1-lb. sections at 11@12c.; 2-lbs., 10@11c. No call for dark. White extracted, in barrels and kegs, 6@6@1/2c.; in small packages, 6@7c.; dark, in barrels and kegs, 4@5c. Demand good. BEESWAX.—25c. Mar. 28. A. V. BISHOP, 142 W. Water St.

Convention Notices.

The next regular meeting of the Cortland Union Bee-Keepers' Association will be held in Union Hall at Cortland, N. Y., on May 10, 1887. D. F. SHATTUCK, Sec.

The next meeting of the West Lake Shore Central Bee-Keepers' Association will be held on May 26, 1887, in Koekring Hall, at Kiel, Wis. FERD ZASTROW, Sec.

The May meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held at Rockton, Ills., on Tuesday, May 24, 1887. D. A. FULLER, Sec.

The ninth annual meeting of the Texas State Bee-Keepers' Association will be held at McKinney, Collin Co., Tex., on May 4 and 5, 1887. All bee-keepers will find a hearty welcome. No hotel bills to pay. An interesting programme is ready. Come one, come all. B. F. CARROLL, Sec.

The Keystone Bee-Keepers' Association will hold its next annual meeting on Tuesday, May 10, 1887, in the Court House at Scranton, Pa. All are welcome: come and bring your knotty questions. Interesting and instructive essays are promised by noted apiarists of the country.

ARTHUR A. CLARK, Sec.

The semi-annual meeting of the Progressive Bee-Keepers' Association will be held in the Town Hall at Bedford, O., on Thursday, May 5, 1887, at 10 a.m. Manufacturers of supplies for bee-keepers are requested to bring with them, or send samples for exhibition. There will be a "picnic dinner." All interested in apiculture are cordially invited to be present.

MISS DEMA BENNETT, Sec.

History, biography, natural scenery, story, song and poem, make up Frank Leslie's Sunday Magazine for May, which is bound to give pleasure wherever it is read. There is a due admixture of grave and gay in the number, and the editor shows much skill in keeping track with the season of the year.

A Cheap Smoker.—Martinsville, Ohio, April 11, 1887.—Messrs. Bingham & Hetherington, Abronia, Mich.: Enclosed find \$2.50 for two Large 2½-inch Bingham Smokers (wide shield). They are for my neighbors. I have one of the Bingham Smokers that I have used six years, and it is as good as ever. Send ½-dozen rates.—Respectfully, AMOS E. GARNER. 17A4t

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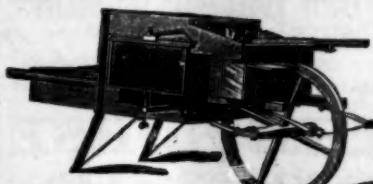
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100 COLONIES of **ITALIAN** and **HYBRID BEES** for Sale Cheap. H. J. SMITH, 11D4t Burlington, Wis.

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Remit by P. O. Money Order, to

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Management of an Apiary for Pleasure
and Profit; by

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It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, \$1.00, postpaid.

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ELEVEN Essays by eleven prominent bee-
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100 Colonies of Italian Bees,
Strong, first-class in every respect,
For Sale at reduced prices.
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A Year among the Bees,

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A Talk about some of the Implements, Plans
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BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work
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W. Z. HUTCHINSON,

Rogersville, Genesee Co., Mich.,

HAS the permission of the writer to publish
the following:

"Forest City, Iowa, March 28, 1887.
W. Z. Hutchinson, Rogersville, Mich.—Dear Sir,
and Friend: I am in receipt of your pamphlet—
'The Production of Comb Honey.' It is the neatest little thing I have seen lately. As a work of
art it is as near perfection as printers in 'country
offices' usually attain to. I venture the opinion
that that cover was the work of a bee-keeper, or
at least originated in his (your) creative brain.
Nobody but a bee-keeper would have thought of
such a unique and appropriate covering. The sub-
ject is treated in a very readable and creditable
manner. I have been practicing substantially the
same method, except the non-use of foundation.
I shall try that this season.
Respectfully Yours, EUGENE SECOR."

■ Reader, if you wish to enjoy the same
pleasure as did Mr. Secor, send 25 cts., and a copy
of the book will be sent postpaid.
16Atf

200 COLONIES

OF

Choice ITALIAN and ALBINO BEES

FOR SALE AT

GREATLY REDUCED PRICES

Also a full line of

Bee Keepers' Supplies

COMB FOUNDATION from Choice,
Select, Yellow BEESWAX A Specialty,
at very low rates, both wholesale and retail.
Do not fail to send for my 27th Annual
Catalogue before purchasing.

Address, WILLIAM W. CARY,
Coleraine, Mass.

5Dtf Mention this paper when writing.

Chapman Honey-Plant Seed

(*Echinops sphaerocephalus*.)

We can supply this seed POST-PAID
at the following prices: One-half ounce, 50
cents; 1 ounce, \$1; 2 ounces, \$1.50; 4
ounces, \$2; $\frac{1}{2}$ pound, \$3; 1 pound, \$5. One
pound of seed is sufficient for half an acre,
if properly thinned out and re-set.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

100 COLONIES of Italian BEES for
Sale. DANIEL WHITMER,
9AAtf South Bend, Ind.

INDIANA.

HEAD-QUARTERS for Pure Italian QUEENS.
■ At prices that will surprise you. Write
for Catalogue and full particulars.

Address, MARTIN & MACY,
North Manchester, Ind.

EGGS FROM HIGH-CLASS POULTRY FOR SALE.

15AAtf

NEW ONE-POUND HONEY PAIL.

THIS new size of our Tapering
Honey Pails is of uniform design
with the other sizes, having the top
edge turned over and has a
handle, making it very convenient
to carry. It is well-made and, when
filled with honey, makes a novel and
attractive small package, that can
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consumers will buy it in order to give the children
a handsome toy pail. PRICE, 75 cents per
dozen, or \$5.00 per 100.

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BEES AND QUEENS a Specialty.—
Untested QUEENS, in May, \$1.00.
After June 1st, 75 cts. Price-List
of Full Colonies, two and 3 frame
Nuclei, Hives, Foundation, &c., Free.
15AAtf JOHN NEBEL & SON, High Hill, Mo.

Dadant's Foundation Factory, wholesale
and retail. See Advertisement in another column.

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HENRY ALLEY,
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the age of the horse; a valuable collection of re-
cipes, and much valuable information.

Price 25 cents—in English or German.

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ARMSTRONG'S New Reversible Hive.

The cheapest, simplest and most practical
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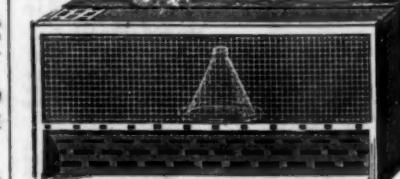
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